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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/918,497

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Shinya Hondo

Q65530

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01/25/2005

SUGHRUE, MION, ZINN, MACPEAK & SEAS
2100 Pennsylvania Avenue, N.W.
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EXAMINER

MUNOZ, GUILLERMO

ART UNIT

PAPER NUMBER

2637

DATE MAILED: 01/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/918,497

Applicant(s)

HONDO, SHINYA

Examiner

Guillermo Munoz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/9/2003 8/1/2001.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claims 1, 3, 9 and 11 are objected to because of the following informalities:

In claim 1, the term "CDMA" in line 1 should be changed to —Code Division Multiple Access—.

In claim 3, the term "PN" in line 4 should be changed to —pseudo random noise—.

In claim 9, the term "CDMA" in line 1 should be changed to —Code Division Multiple Access—.

In claim 11, the term "PN" in line 5 should be changed to —pseudo random noise—.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 5-11, and 13-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Iwakiri (US Patent 6,795,488 B1).

Regarding claim 1, Iwakiri teach a transceiver circuit having a plurality of Finger units, each capable of receiving a signal from a different type of communications medium, note figure 2 elements 290A-290C. Iwakiri transceiver adaptable to receive different types of CDMA services, note Col. 3, lines 59-63. It would have been within the level of one having ordinary skill in the art at the time of the invention to characterize the Finger units allocated to a particular type of service as a block of Finger units.

Regarding claim 2; Iwakiri further teach the claimed subject matter “packet data, high-speed data, voice data and low-speed data”, note Col. 2 line 62- Col. 3 line 5. Iwakiri does not specifically state packet type data, however, Iwakiri does teach transmitted data is in framed, note figure 10(a). Examiner interprets the term “frame” to be synonymous with the term “packet”, as applied in Iwakiri.

Regarding claim 3, Iwakiri further teach the claimed subject matter as follows. Iwakiri teach searching means, note Col.4, line 42, for searching the received signal for a plurality of specific incoming waves of a specific code channel. Iwakiri teach the specific code channels comprising orthogonal PN sequences that represent codes unique to the code channel on a one-to-one basis, note Col.2, lines 12-31. A plurality of receiving electric powers of specific incoming waves and a plurality of phase offsets (i.e. time offsets) are derived from search results, note Col. 4, lines 45-47. Iwakiri teach that the searching means produces searcher detection signals and parameter settings output to the rake receiving units to establish finger parameters. Iwakiri teach the number of finger units allocated to a particular code channel depends on an importance degree associated with the code channel, note Col. 8, lines 1-18. That is, Iwakiri's

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searching means, as illustrated in figure 3, provides parameter settings which include an importance degree associated with the code channel to the finger units.

Regarding claim 5 Iwakiri further teach the claimed subject matter as follows. Iwakiri teach a buffer unit 250 (in figure 2) for storing the received signal and subtracting interference replica signals from the stored signal, note Col. 28, lines 40-55. Iwakiri teaches that frequency error is difficult to detect with high-speed data, therefore, pilot channel frequency error is assumed as the frequency, note Col. 11, lines 35-60. Iwakiri teaches that the assumed frequency error is based on an average frequency error (i.e. stored path information), note Col. 49, lines 47-67.

Regarding claim 6 Iwakiri further teach the claimed subject matter, note the decoding unit 270 of figure 2 and the buffer units 304A-304C in figure 8.

Regarding claim 7 Iwakiri further teach the claimed subject matter by the inherency of the operation of the allocating unit.

Regarding claim 8, see claim 7.

Regarding claim 9, see claim 1.

Regarding claim 10, see claim 2.

Regarding claim 11, see claim 3.

Regarding claim 13, see claim 5.

Regarding claim 14, se claim 6.

Regarding claim 15, see claim 7.

Regarding claim 16, see claim 7.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 4 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "immediately" in line 3 is a relative term which renders the claim indefinite. The term "immediately" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Regarding claim 12, see claim 4.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwakiri.

Regarding claim 4, Iwakiri teach the control means controls whether or not the interference removal operation for a code channel is performed is based on the degree of importance of that control channel, note Col. 8, lines 13-18. Also, Iwakiri teach that frequency

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error is difficult to detect with high-speed data, note Col. 11, lines 35-60. One reason that the frequency error occurs in the propagation path is a Doppler frequency (about 100 Hz) based on the Doppler effect in a mobile communication. Because a data rate in a high speed data transmission is more than 1 Mbps and because a data rate for each code channel is more than several tens Kbps, the data rate is greatly higher than the Doppler frequency, note Col. 11, lines 33-40. However, Iwakiri does not explicitly state that the low-speed data and voice data are demodulated immediately.

It would have been obvious to one having ordinary skill in the art at the time of the invention to characterize the low-speed data demodulation process as being carried out immediately, since Iwakiri suggest in Col. 11, lines 33-40 and Col. 8, lines 13-18, that slow data rate does not require the use of an average frequency error reference or interference cancellation.

Regarding claim 12, see claim 4.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Guillermo Munoz whose telephone number is 571-272-3045. The examiner can normally be reached on Monday-Friday 8:30a.m-4:30p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

William R. Roney

GM
December 17, 2004

Jean B. Corrielus
JEAN B. CORRIELUS
PRIMARY EXAMINER

1/21/05